# IV.16 LIVESTOCK GRAZING

This chapter addresses potential impacts from implementing the Desert Renewable Energy Conservation Plan (DRECP) Bureau of Land Management (BLM) Land Use Plan Amendment (LUPA) alternatives on livestock grazing. This chapter considers and quantifies, for each alternative, the extent to which Development Focus Areas (DFAs) and BLM proposed land designations may affect livestock grazing. For purposes of this programmatic analysis, existing conditions for grazing appear in Volume III, Chapter III.16.

## IV.16.1 Approach to Impact Analysis

### IV.16.1.1 General Methods

This Environmental Impact Statement (EIS) is a programmatic document; it analyzes typical impacts and does not evaluate the site-specific impacts of specific projects. Project-specific impacts would be assessed during the permitting process and in supplemental National Environmental Policy Act/California Environmental Quality Act (NEPA/CEQA) documents.

Potential impacts are based on to what degree BLM grazing allotments intersect with proposed DFAs and existing and proposed BLM land designations. BLM grazing allotments include some non-BLM lands. As a result, there is some overlap between BLM grazing allotments and Farmland Mapping and Monitoring Program (FMMP)-designated, non-BLM grazing lands.

Assumptions used in the analysis of livestock grazing impacts include the following:

- Livestock grazing would not be permitted in areas developed for utility-scale solar and geothermal energy production, but such areas likely would be compatible with wind and transmission development.
- For wind energy projects, livestock might need to be removed from areas during blasting or heavy equipment operations. However, depending on the location, size, and design of a wind project, wind development generally would not preclude livestock grazing.
- All existing leases and permits would be subject to terms and conditions established by BLM regulations.
- Vegetation would be re-established, through reclamation and restoration practices upon decommissioning of renewable energy projects, to the standards required by BLM regulations and project-specific design criteria.
- Livestock grazing allotments on public lands are tied to private property owned by grazing permittees (referred to as the “base property”).

- There are 2,200,000 acres of BLM grazing allotments in the LUPA Decision Area. Based on FMMP mapping, 989,000 acres of private grazing lands are in the LUPA Decision Area. Because BLM grazing allotments include private permittee-owned or controlled base property, some private lands are included in the BLM grazing allotment analysis.

The general metric used for assessing impacts on livestock grazing is the acreage of livestock grazing allotments that would overlap with renewable energy development under each alternative. Where grazing overlaps with a conservation designation, alterations may be made to BLM grazing allotments per new permit terms and conditions (e.g., trailing, season of use), but grazing would not be entirely prohibited on those allotments.

# IV.16.2 Typical Impacts Common to All Action Alternatives

The potential effects of renewable energy development (solar, wind, and geothermal) and associated right-of-way (ROW) requirements (major transmission, generator tie-lines, and substations) on livestock grazing within the LUPA Decision Area were evaluated in part by reviewing the Solar Programmatic EIS (PEIS), Wind PEIS, and Geothermal PEIS.

This section analyzes impacts from typical solar, wind, and geothermal energy development and required transmission and ROWs. Proposed LUPA alternatives would generate future renewable energy development applications within identified DFAs, and each project would undergo supplemental NEPA and/or CEQA analysis for its impacts. Impacts related to renewable energy projects and associated facilities would vary depending on the technology proposed, location of the project area, the time and degree of disturbance from development, and the size and complexity of the facilities.

## IV.16.2.1 Impacts of Renewable Energy and Transmission Development

As described in Chapter III.16, several grazing allotments are within the LUPA Decision Area. Grazing on public lands is authorized through grazing permits or leases. BLM grazing regulations specify that permits or leases can be canceled with a two-year notification to the grazing permittee when the land will be put to a public purpose that precludes livestock grazing (43 Code of Federal Regulations [CFR] 4110.4-2[b]). The grazing regulations also provide reimbursement to grazing permittees for their share of the value of authorized grazing improvements on public land. The specific locations in which renewable energy and transmission development would be allowed would be driven by LUPA decisions, which may encourage or restrict development in some areas.

Grazing activities would be excluded or modified in areas developed for utility-scale renewable energy production, both inside or outside DFAs. All or portions of grazing

permits or leases in areas developed for renewable energy production would be canceled or modified after a permittee receives the required two-year notification. Depending on conditions unique to an individual grazing operation, reductions or changes to authorized grazing use may be necessary because of the loss of all or part of either the forage base or range improvements (e.g., fencing, water development, seedlings). Livestock grazing on public lands is the main source of livelihood for many public land ranchers, and significant reductions in permitted grazing would adversely affect the economic value of ranches and threaten their continued viability. More detailed socioeconomic analysis would be conducted in supplemental project-specific NEPA and CEQA reviews.

#### *IV.16.2.1.1 Impacts of Site Characterization*

Generally, site characterization for wind, solar, and transmission development would have minimal if any impacts on livestock grazing. For geothermal development, exploration activities could affect large areas of grazing in the short term during construction of well pads, exploration wells, and roads.

#### *IV.16.2.1.2 Impacts of Construction and Decommissioning*

The construction and decommissioning of renewable energy and transmission facilities could result in impacts on livestock grazing. Impacts include, but are not limited to, the following:

- Loss of forage for livestock in areas cleared of vegetation.
- Loss of forage, reduced forage palatability because of dust on vegetation, spread of noxious weeds, and increased number of wildland fires.
- Noise and other disturbance may affect distribution of livestock and subsequently affect vegetation.
- Increased traffic could result in livestock injury or death, harassment of livestock, or management issues (e.g., open gates).
- Soil and water contamination could harm forage and livestock.
- Social and economic impacts on ranchers and communities could result from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition. Other potential socioeconomic impacts are discussed in Chapter IV.23.

#### *IV.16.2.1.3 Impacts of Operations and Maintenance*

The operations and maintenance of renewable energy and transmission facilities would generally have minimal impacts on livestock grazing. Wind and transmission facilities

would generally have less severe impacts than solar or geothermal because of the smaller footprints of those technologies. Once constructed, wind and transmission facilities would not prevent grazing. During access to renewable energy facilities (many in remote locations) for operation and maintenance purposes, vehicles and noise along roadways and other ROWs may result in disturbance, injury, or harassment of livestock. Livestock movement may be restricted by fencing around solar and geothermal projects. If facilities are not fenced, geothermal facility sump pits could adversely affect livestock grazing by exposing livestock to toxic concentrations of minerals and chemicals from drilling fluids.

#### *IV.16.2.1.4 Impacts of BLM Land Designations and Management Actions*

Proposed LUPA land designations would be managed to protect ecological, historic, cultural, scenic, scientific, and recreation resources and values, however livestock grazing may sometimes be restricted or limited. While other land uses are allowed within these areas, those uses must be compatible with the resources and values that the land designation is intended to protect.

Impacts on grazing could be beneficial or neutral in areas where LUPA designation decisions protect grazing allotments from renewable energy development. Adverse impacts on grazing could occur in areas where allotments are reduced or eliminated through land use designations (e.g., in Areas of Critical Environmental Concern [ACECs] or within National Conservation Lands). Adverse impacts may also result if a LUPA designation restricts access to grazing allotments by closing roads.

Where Special Recreation Management Areas (SRMAs) are increased, off-highway vehicle riding, hunting, fires, and access to areas within grazing allotments could have impacts on grazing. To the extent SRMAs exclude surface occupancy from renewable energy development and maintain or enhance recreational setting characteristics of remoteness and naturalness, SRMAs may also provide limited protection to grazing allotments.

Details on allowable uses and management within National Conservation Lands appear in the LUPA description in Volume II. Details on the goals, objectives, allowable uses, and management actions for each ACEC and SRMA unit are in the LUPA worksheets in Appendix L.

## IV.16.3 Impact Analysis by Alternative

The following sections present impact analysis for the No Action Alternative, the Preferred Alternative, and Alternatives 1 through 4. Potential impacts on livestock grazing allotments are summarized by alternative in Table IV.16-1 and Table IV.16-2.

## Table IV.16-1
## Potential Acres of Grazing Allotments Impacted by Renewable Energy and Transmission by Alternative

| Area | No Action | Preferred Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 |
|---|---|---|---|---|---|---|
| Cadiz Valley and Chocolate Mountains | 2,000 | 0 | 0 | 0 | 0 | 0 |
| Imperial Borrego Valley | 0 | 0 | 0 | 0 | 0 | 0 |
| Kingston and Funeral Mountains | 4,000 | 2,000 | 0 | 900 | 0 | 0 |
| Mojave and Silurian Valley | 200 | 20 | 30 | 100 | 20 | 0 |
| Owens River Valley | 0 | 1,900 | 5,000 | 1,450 | 1,400 | 2,200 |
| Panamint Death Valley | 0 | 0 | 0 | 40 | 500 | 250 |
| Pinto Lucerne and Eastern Slopes | 200 | 2,000 | 1,500 | 2,300 | 1,550 | 700 |
| Piute Valley and Sacramento Mountains | 0 | 0 | 0 | 0 | 0 | 0 |
| Providence and Bullion Mountains | 4,300 | 400 | 400 | 500 | 600 | 200 |
| West Mojave and Eastern Slopes | 2,300 | 8,000 | 600 | 6,700 | 1,220 | 1,100 |
| CDCA Area Outside the DRECP Boundary | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **13,000** | **14,320** | **7,530** | **11,990** | **5,290** | **4,450** |

**Note:** The following general rounding rules were applied to calculated values: values greater than 1,000 were rounded to the nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore, the subtotals may not sum to the total in the table.

**Table IV.16-2**
**Potential Acres of Grazing Allotments Impacted by BLM Land Designations[1] and Lands Managed for Wilderness Characteristics by Alternative**

| Area | No Action | Preferred Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 |
|---|---|---|---|---|---|---|
| Cadiz Valley and Chocolate Mountains | 32,600 | 85,000 | 78,000 | 78,000 | 78,200 | 64,000 |
| Imperial Borrego Valley | 0 | 0 | 0 | 0 | 0 | 0 |
| Kingston and Funeral Mountains | 63,300 | 164,000 | 156,000 | 302,100 | 273,500 | 189,000 |
| Mojave and Silurian Valley | 102,300 | 168,000 | 88,000 | 202,500 | 216,400 | 87,000 |
| Owens River Valley | 56,300 | 92,000 | 74,000 | 159,000 | 158,800 | 72,800 |
| Panamint Death Valley | 123,300 | 146,000 | 146,000 | 147,900 | 148,300 | 148,000 |
| Pinto Lucerne and Eastern Slopes | 295,300 | 239,000 | 248,000 | 306,500 | 327,800 | 243,800 |
| Piute Valley and Sacramento Mountains | 25,000 | 49,000 | 24,700 | 25,000 | 25,000 | 25,000 |
| Providence and Bullion Mountains | 177,800 | 396,000 | 240,400 | 349,900 | 339,500 | 269,000 |
| West Mojave and Eastern Slopes | 294,600 | 331,000 | 335,000 | 546,860 | 548,800 | 355,000 |
| CDCA Area Outside the DRECP Boundary | 225,000 | 132,000 | 105,050 | 293,000 | 163,400 | 165,050 |
| **Total** | **1,395,500** | **1,801,000** | **1,495,150** | **2,410,760** | **2,279,700** | **1,618,650** |

[1] BLM Land Designations include existing and proposed: NLCS, ACECs, Wildlife Allocations, Trail Management Corridors, and SRMAs (areas managed for recreation emphasis under the No Action Alternative).

**Note:** The following general rounding rules were applied to calculated values: values greater than 1,000 were rounded to the nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore, the subtotals may not sum to the total in the table.

## IV.16.3.1 No Action Alternative

The No Action Alternative assumes that the state's renewable energy goals would be achieved without the Proposed LUPA and that renewable energy and transmission development for projects in the LUPA Decision Area would be developed on a project-by-project basis in a pattern consistent with past and ongoing renewable energy and transmission projects.

Any areas currently excluded from development by statute, regulation, or proclamation would retain those exclusions. Any areas that are administratively excluded would continue to be assessed based on management guidance within BLM local field office land use plans. Without the Proposed LUPA, renewable energy development would continue to be patchy, which could result in fragmentation and loss of additional parts of livestock grazing permits, leases, and allotments.

#### *IV.16.3.1.1 Impacts for Renewable Energy and Transmission Development – No Action Alternative*

Under the No Action Alternative, existing BLM land use plans in the LUPA Decision Area would continue to be implemented within BLM-managed lands. These land use plans would continue to allow for renewable energy and transmission development within certain land designations, including Solar Energy Zones and Variance Lands. These projects would continue to require LUPAs for approval if they are proposed outside Solar Energy Zones or Solar Variance Lands.

Potential impacts on grazing allotments in the LUPA Decision Area (ecoregion subareas and California Desert Conservation Area [CDCA] outside the DRECP) under the No Action Alternative are presented in Appendix R2, Table R2.16-1 by technology type, and in Figure IV.16-1.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield Resource Management Plan (RMP) Area, and Bishop RMP Area) under the No Action Alternative are presented in Appendix R2 Table R2.16-2.

***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under the No Action Alternative, approximately 13,000 acres of livestock grazing allotments would overlap with available development areas (11,000 acres of solar, 700 acres of wind, and 1,300 acres of transmission).

BLM grazing permits and leases would likely be reduced, modified, or canceled in areas where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments, there would be a loss of forage in areas approved for development. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Renewable energy and transmission development would have a variety of impacts on adjacent grazing lands. Fugitive dust from construction would reduce forage palatability. Construction may spread noxious weeds and increase wildland fires. Livestock may be adversely affected by construction noise and move to areas farther from construction activities, impacting vegetation and forage (over-grazing). Project use of local water wells could reduce the amount of water available for livestock. Increased traffic would increase the potential for livestock injury or death from vehicle collisions. Increased access to grazing areas could cause grazing management problems through interference with pasture gates. Construction activities could also lead to accidental soil and water contamination that would harm both forage and livestock.

### *IV.16.3.1.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – No Action Alternative*

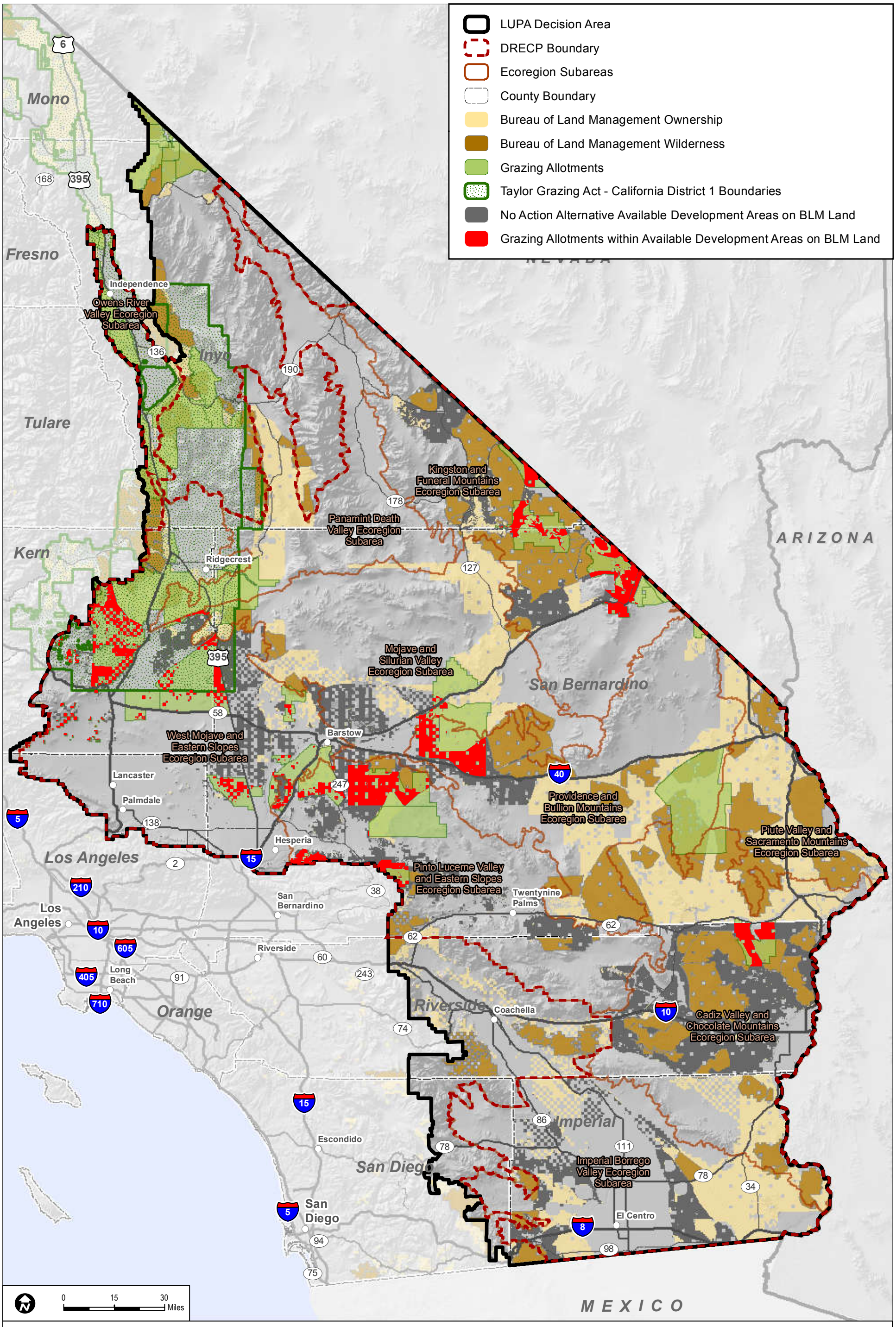
***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

The No Action Alternative would not designate additional conservation designations. Without approval of an action alternative, there would be continued protection of existing conservation designations, such as wilderness, and protections from existing land use plans. In addition, under the No Action Alternative, renewable energy projects would continue to be evaluated on a project-by-project basis requiring project-specific mitigation.

Potential impacts on livestock grazing resulting from existing BLM land designations (such as ACECs) under the No Action Alternative are summarized below and shown in Appendix R2, Table R2.16-3. Under the No Action Alternative, there would be no change to existing BLM land designations or to lands available for livestock grazing, and BLM land designations would not impact available livestock grazing allotments.

Under the No Action Alternative, existing conservation designations would provide ongoing conservation. However, there would be no proposed conservation designations to provide landscape scale guidance on how to offset the effects of renewable energy or transmission development.

Currently, approximately 62% of grazing allotment acres are located within existing conservation designations or BLM land designations (such as ACECs; Table R2.16-3). The Pinto Lucerne Valley and Eastern Slopes, Providence and Bullion Mountains, and West Mojave and Eastern Slopes ecoregion subareas would have the greatest number of acres of BLM land designations overlapping with grazing allotments.




Sources: ESRI (2014); CEC (2013); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-1**

**Grazing Land in Available Development Areas – No Action Alternative**

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Overlap of BLM ACECs, SRMAs, and areas managed for recreation emphasis with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under the No Action Alternative are presented in Appendix R2, Table R2.16-4.

#### *IV.16.3.1.3 Impacts of Transmission Outside the DRECP Area*

Outside the DRECP area, additional transmission lines would be needed to deliver the additional renewable energy to load centers (areas of high demand). It is assumed that new transmission lines outside the DRECP area would use existing transmission corridors between the DRECP area and existing substations in the more populated coastal areas of the state. The areas outside the DRECP through which new transmission lines might be constructed are San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley. These areas and their livestock grazing are described in Section III.16.5.

No grazing allotments are crossed by transmission corridors in the Los Angeles and North Palm Springs–Riverside areas. In the San Diego area, two allotments are traversed for a distance of 2.3 miles. In the Central Valley, 8 grazing allotments are traversed by the transmission corridor for 42 miles. Ten additional allotments are outside the corridor, but within 1.5 miles.

***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Transmission towers have relatively small footprints and are widely spaced, resulting in a minimal loss of acreage available for grazing. Livestock would not be restricted for the tower area except during construction, and vegetation would be restored around the towers. Access to towers in existing corridors generally would be on existing access roads with spurs to the new towers, as needed. Spurs would also result in minor grazing acreage loss.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Changes from construction and operation of transmission towers would not block access to grazing land and would not adversely impact adjacent grazing lands.

### IV.16.3.2 Preferred Alternative

This section addresses two components of effects of the BLM Proposed LUPA—the streamlined development of renewable energy and transmission on BLM land under the LUPA and the impacts of the amended land use plans themselves.

### *IV.16.3.2.1 Impacts for Renewable Energy and Transmission Development – Preferred Alternative*

Total potential impacts on livestock grazing allotments are summarized in Table IV.16-1. Potential overlap of renewable energy and transmission development with grazing allotments under the Preferred Alternative are shown in Appendix R2, Table R2.16-5 by technology type and in Figure IV.16-2.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under the Preferred Alternative are presented in Appendix R2, Table R2.16-6.

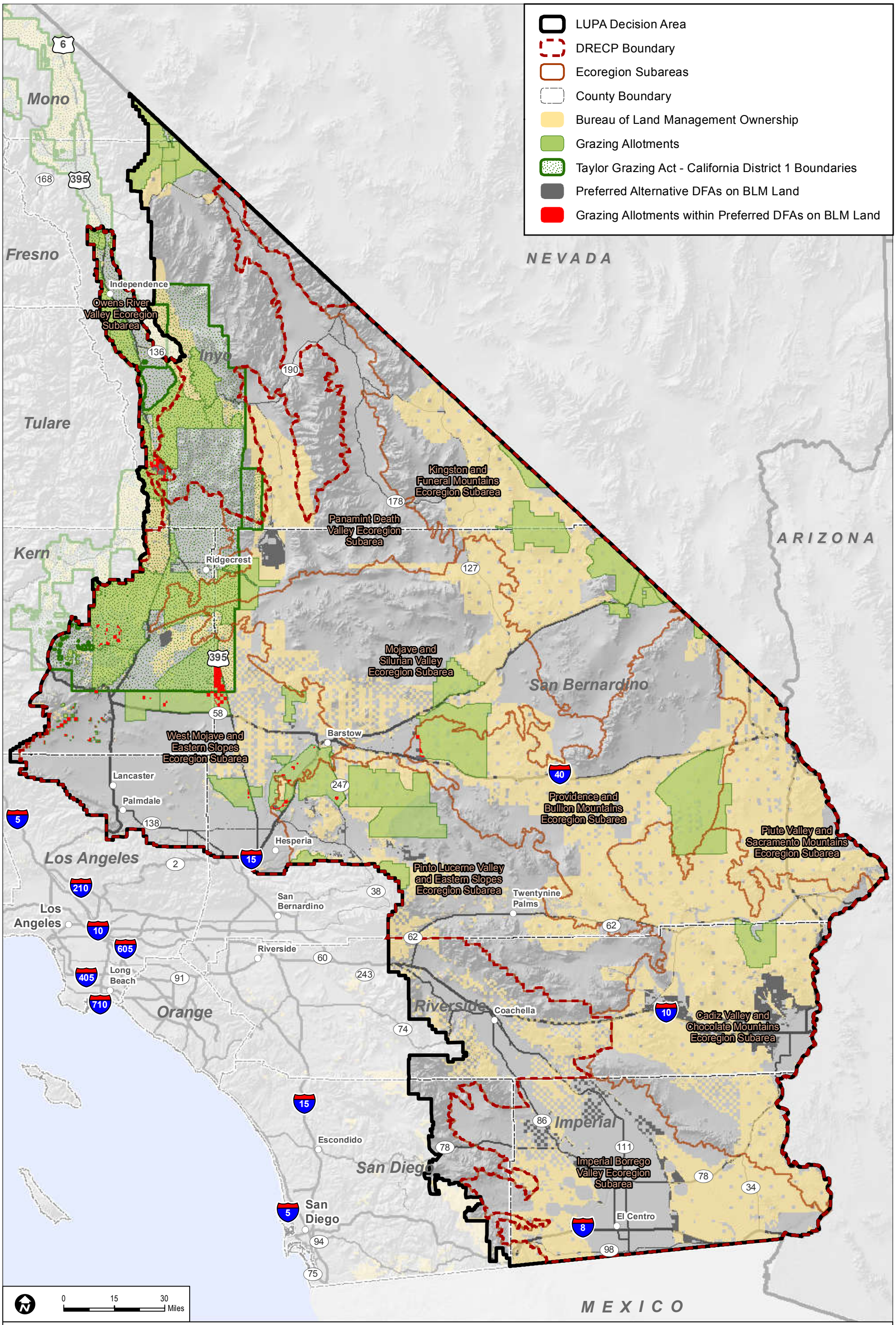
***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under the Preferred Alternative, DFAs would overlap grazing allotments on BLM-managed lands (Figure IV.16-2). No grazing allotments would be within DFAs in the Bakersfield or Bishop RMP Areas. Approximately 14,300 acres of livestock grazing allotments would overlap with DFAs within the CDCA Area (5,000 acres of solar, 200 acres of wind, 1,000 acres of geothermal, and 8,000 acres of transmission; Table R2.16-5).

BLM grazing permits and leases would likely be canceled, modified, or reduced where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments, areas cleared of vegetation would have a loss of forage. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Renewable energy and transmission development under the Preferred Alternative would have a variety of impacts on adjacent grazing operations. Potential impacts would be the same as those described for the No Action Alternative (see Figure IV.16-2, Grazing, Preferred Alternative).




Sources: ESRI (2014); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-2**

## Grazing Land within DFAs – Preferred Alternative

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## Impacts on Variance Process Lands

Variance Process Lands represent the BLM Solar PEIS Variance Lands as screened for the Proposed LUPA based on BLM screening criteria. Development of renewable energy on Variance Process Lands would not require a BLM LUPA; the environmental review process would be somewhat simpler than if the location were left undesignated. However, all solar, wind, and geothermal energy development applications would have to follow a variance process before BLM would determine whether to continue with processing them (see Volume II, Section II.3.3.3.2 for details of the variance process).

Under the Preferred Alternative, approximately 40,000 acres of Variance Process Lands are in the LUPA Decision Area. Variance Process Lands are found in the following areas:

- East of California City north of Edwards Air Force Base
- South of Interstate 40 near Amboy
- North of Interstate 40 west of Needles
- North of Blythe, immediately south of the Big Maria Mountains Wilderness Area
- North of State Route 178 West of Pahrump
- On the edge of the Salton Sea North of Bombay Beach

Approximately 10,000 acres of grazing allotments overlap with Variance Process Lands. Development within Variance Process Lands that overlap with grazing allotments could have the same impacts as discussed above for DFAs.

### *Conservation and Management Actions*

The conservation strategy for the Preferred Alternative (presented in Volume II, Section II.3.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes specific Conservation and Management Actions (CMAs) for the Preferred Alternative as described here.

CMAs for livestock grazing on BLM-administered lands include actions that apply to project-specific activities. The CMAs for grazing include proposed standards of rangeland health and guidelines for grazing management within the California Desert District allotments (Bishop and Bakersfield have approved standards and guidelines in place and are not modified by the DRECP). Grazing regulations (43 CFR 4110.4-2[b]) describe the process of devoting all or parts of a grazing allotment to another purpose and providing permittees and lessees with a two-year notification. Relinquishment of certain grazing permits and leases falls under the 2012 Appropriations Act (Public Law 112-74) and provides policy whereby permittees and lessees can donate their permits and leases back

to BLM for permanent relinquishment through the land use planning process. Grazing allotments that were relinquished prior to fiscal year 2012 would be identified in the Proposed LUPA as permanently unavailable for grazing.

**LUPA-LIVE-1:** Adopt the Standards of Rangeland Health and Guidelines for Grazing Management, as described below, for the CDCA. This CMA does not apply in the Bishop and Bakersfield RMPs.

Standards of Rangeland Health and Guidelines for Grazing Management

Regional Rangeland Health Standards and Guidelines are required for all BLM-administered lands in accordance with 43 CFR 4180. These regulations require that State Directors, in consultation with Resource Advisory Councils, develop such standards and guidelines.

The BLM in coordination and consultation with the California Desert District Advisory Council (see Section 601 of the Federal Land Policy and Management Act as amended) developed standards and guidelines for the CDCA and used the following land use plan amendments to analyze the specific standards and guidelines and to provide the public an opportunity to comment.

- Northern and Eastern Colorado Desert Management Plan (NECO), Record of Decision signed December 2002 (BLM 2002a)
- Northern and Eastern Mojave Desert Management Plan (NEMO), Record of Decision signed December 2002 (BLM 2002b)
- West Mojave Plan (WEMO) signed March 2006 (BLM 2006)

The regulations require approval by the Secretary of the Interior prior to full implementation of standards and guidelines. Until approval is received, the fallback standards and guidelines will be used in the five California Desert District offices.

The Bakersfield and Bishop field offices are covered under the Central California Standards and Guidelines and require no additional approval to continue to use that document.

Standards and Guidelines for the California Desert District

**Standards.** Standards of land health are expressions of levels of physical and biological condition or degree of function required for healthy lands and sustainable uses. Standards also define minimum resource conditions that must be achieved and sustained (H-4180-1 Rangeland Health Standards).

**Guidelines.** Guidelines are practices, methods, or techniques determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard. Guideline topics include grazing systems, vegetative treatments, or improvement projects that help managers and permittees achieve standards. Guidelines may be adapted or modified when monitoring or other information indicates the guideline is not effective, or a better means of achieving the applicable standard becomes appropriate (H-4180-1 Rangeland Health Standards).

The following standards for the CDCA (apply to all BLM-administered lands within the DRECP portion of the CDCA) are from the NECO, NEMO, WEMO, and Palm Springs – South Coast RMP land use plan amendments.

Soils

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, geology, land form, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor and provide a stable watershed, as indicated by the following:

- Canopy and ground cover are appropriate for the site.
- There is a diversity of plant species with a variety of root depths.
- Litter and soil organic matter are present at suitable sites.
- Microbiotic soil crusts are maintained and in place at appropriate locations.
- Evidence of wind or water erosion does not exceed natural rates for the site.
- Soil permeability, nutrient cycling, and water infiltration are appropriate for the soil type.

Native Species

Healthy, productive, and diverse habitats for native species, including special-status species (federal threatened and endangered, federally proposed, federal candidates, BLM Special-Status Species, California State threatened and endangered species, and Unique Plant Assemblages), are maintained in places of natural occurrence, as indicated by the following:

- Photosynthetic and ecological processes are continuing at levels suitable for the site, season, and precipitation regimes.
- Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment.
- Plant communities are producing litter within acceptable limits.

- Age class distribution of plants and animals are sufficient to overcome mortality fluctuations.
- Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events.
- Alien and noxious plants and wildlife do not dominate a site or do not require action to prevent the spread and introduction of noxious/invasive weeds.
- Appropriate natural disturbances are evident.
- Populations and their habitats are sufficiently distributed and healthy to prevent the need for new listing as special status species.

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained, as indicated by the following:

- Vegetative cover adequately protects banks and dissipates energy during peak water flows.
- Dominant vegetation is an appropriate mixture of vigorous riparian species.
- Recruitment of preferred species is adequate to sustain the plant community.
- Stable soils store and release water slowly.
- Plant species present indicate soil moisture characteristics are being maintained.
- There is minimal cover of shallow-rooted invader species, and they are not displacing deep-rooted native species.
- Shading of stream courses and water courses is sufficient to support riparian vertebrates and invertebrates.
- Stream is in balance with water and sediment being supplied by the watershed.
- Stream channel size (depth and width) and meander is appropriate for soils, geology, and landscape.
- Adequate organic matter (litter and standing dead plant material) is present to protect the site from excessive erosion and to replenish soil nutrients through decomposition.

Water Quality

Surface water and groundwater comply with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State standards, as indicated by the following:

- The following do not exceed the applicable requirements: chemical constituents, water temperature, nutrient loads, fecal coliform, turbidity, suspended sediment, and dissolved oxygen.
- Standards are achieved for riparian, wetlands, and water bodies.
- Aquatic organisms and plants (e.g., macro-invertebrates, fish, algae, and plants) indicate support for beneficial uses.
- Monitoring results or other data show water quality is meting the Standard.

The following Guidelines for grazing in the CDCA (applies to all BLM administered lands within the DRECP portion of the CDCA) are from the NECO, NEMO, WEMO, and Palm Springs – South Coast RMP land use plan amendments.

- Facilities will be located away from riparian-wetland areas whenever they conflict with achieving or maintaining riparian-wetland functions.
- The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.
- Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs, adits, and seeps) would be modified so PFC and resource objectives can be met, and incompatible projects would be modified to bring them into compliance. The BLM would consult, cooperate, and coordinate with affected interests and livestock producers prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities would be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives.
- Supplements (e.g., salt licks) will be located one-quarter mile or more away from wetland systems so they do not conflict with maintaining riparian-wetland functions.
- Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.

- Grazing management practices will meet state and federal water quality standards. Impoundments (stock ponds) having a sustained discharge yield of less than 200 gallons per day to surface or groundwater are excepted from meeting state drinking water standards per California State Water Resources Control Board Resolution Number 88-63.
- In the CDCA all wildfires in grazing allotments will be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk), prescribed burning may be used as a tool for restoration. Prescribed burns may be used as a management tool where fire is a natural part of the regime.
- In years when weather results in extraordinary conditions, seed germination, seedling establishment, and native plant species growth should be allowed by modifying grazing use.
- Grazing on designated ephemeral rangeland could be allowed only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.
- During prolonged drought, range stocking will be reduced to achieve resource objectives and/or prescribed perennial forage utilization. Livestock utilization of key perennial species on year-long allotments should be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.
- Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals should be recorded and evaluated for future control measures. Methods and prescriptions should be implemented, and an evaluation would be completed to ascertain future control measures for undesirable species.
- Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of special-status species including federally proposed, federal candidates, BLM special-status, or California State threatened and endangered to promote their conservation.
- Grazing activities should support biological diversity across the landscape, and native species and microbiotic crusts are to be maintained.
- Experimental research efforts should be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.

Livestock utilization limits of key perennial species will be as shown in Table IV. 16-3 for the various range types.

**Table IV.16-3**
**Livestock Utilization Limits of Key Perennial Species**

| Range Type | Percent Use of Key Perennial Species | |
|---|---|---|
| | *Poor–Fair range condition or growing season* | *Good–Excellent range condition or dormant season* |
| Mojave/Sonoran Desert scrub | 25 | 40 |
| Salt Desert shrub land | 25 | 35 |
| Semi-desert grass and shrub land | 30 | 40 |
| Sagebrush grassland | 30 | 40 |
| Mountain shrub land | 30 | 40 |

### *Monitoring*

Monitoring of grazing allotment resource conditions would be routinely assessed to determine if rangeland health standards are being met. In those areas not meeting one or more standards, monitoring processes would be established where none exist to monitor indicators of health until the standard or resource objective has been attained. Livestock trail networks, grazed plants, livestock facilities, and animal waste are expected impacts on all grazing allotments and these ongoing impacts would be considered during analysis of the assessment and monitoring process. Activity plans for other uses or resources that overlap an allotment could have prescribed resource objectives that may further constrain grazing activities (e.g., ACEC). In an area where a standard has not been met, the results from monitoring changes to grazing management required to comply would be reviewed annually. During the final phase of the assessment process, the range determination includes the schedule for the next assessment of resource conditions. To attain standards and resource objectives, the best science would be used to determine appropriate grazing management actions. Cooperative funding and assistance from other agencies, individuals, and groups would be sought to collect prescribed monitoring data for indicators of each standard.

LUPA-Wide Conservation and Management Actions for Livestock Grazing

**LUPA-LIVE-2:** In the LUPA Decision Area only, accept grazing permit/lease donations in accordance with legislation in the Fiscal Year 2012 Appropriations Act (Public Law 112-74).

**LUPA-LIVE-3:** Outside the LUPA Decision Area, determine whether special status species would benefit from making allotments unavailable to domestic livestock grazing in the event that the permit/lease is relinquished.

**LUPA-LIVE-4:** If the BLM determines that grazing is to be removed from an authorized grazing allotment, provide the grazing permittee/lessee a two-year notification as outlined in the Grazing Regulations found at 43 CFR 4110.4-2(b) and Washington Office Instruction Memorandum 2011-181 (BLM 2011).

**LUPA-LIVE-5:** For grazing allotments that BLM has received a voluntary request for relinquishment prior to fiscal year 2012, continue the planning process for making these allotments unavailable for grazing.

**LUPA-LIVE-6:** Complete the process for approving rangeland health standards and guidelines for the remaining portions of the CDCA planning area (NEMO, WEMO, NECO).

**LUPA-LIVE-7:** Make Pilot Knob, Valley View, Cady Mountain, Cronese Lake, and Harper Lake allotments, allocations unavailable for livestock grazing and change to management for wildlife conservation and ecosystem function. Reallocate the forage previously allocated to grazing use in these allotments to wildlife and ecosystem functions. Pilot Knob was closed in the WEMO plan amendment. All forage allocated to livestock grazing in these allotments will be reallocated to wildlife use and ecosystem function. The vegetation in the Valley View Allotment, which was previously allocated to livestock, will be reallocated to wildlife use and ecosystem function.

**LUPA-LIVE-8:** The following vacant grazing allotments within the CDCA will have all vegetation previously allocated to grazing use reallocated to wildlife use and ecosystem functions and will be closed and unavailable to future livestock grazing: Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi Valley, and Piute Valley.

**LUPA-LIVE-9:** Allocate the forage that was allocated to livestock use in the Lava Mountain and Walker Pass Desert allotments (which have already been relinquished under the 2012 Appropriations Act) to wildlife use and ecosystem function and permanently eliminate livestock grazing on the allotments.

DFA Conservation and Management Actions for Livestock Grazing

**DFA-VPL-LIVE-1:** Avoid siting solar developments in active livestock grazing allotments. If a ROW is granted for solar development in an active livestock grazing allotment, prior to solar projects being constructed in active livestock allotments, an agreement must be reached with the grazing permittee/lessee on the two-year notification requirements. If any rangeland improvements such as, but not limited to, fences, corrals, or water storage projects are to be impacted by energy projects, reach agreement with the BLM and the grazing permittee/lessee on moving or replacing the range improvement. This includes the costs for NEPA, clearances, and materials.

**DFA-VPL-LIVE-2:** In California Condor use areas, wind energy ROWs will include a term and condition requiring the permittee and wind operator to eliminate grazing of livestock.

**DFA-VPL-LIVE-3:** Include no surface occupancy stipulation on geothermal leases in active grazing allotments.

The following CMAs are also relevant to livestock grazing:

- Specific Air Resources CMAs
- Specific Soil, Water, and Water-Dependent Resources CMAs
- Water Quality CMAs
- Soil Resources CMAs
- Weed Management CMAs
- Fire Management CMAs
- Noise Management CMAs
- Nuisance Wildlife and Invasive Species CMAs
- Transmission Impacts CMAs

### *IV.16.3.2.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – Preferred Alternative*

Under the Preferred Alternative, existing and proposed BLM land designations would provide ongoing conservation of lands, including livestock grazing allotments, within these areas. BLM land designations may also result in restrictions to grazing or the designation of allotments as unavailable for grazing.[1]

The Proposed LUPA will complete the relinquishment process for several allotments. Most were purchased by Fort Irwin as part of mitigation for military training activities and at least two allotments were purchased by organizations wishing to protect the natural resources within the allotments. Under all action alternatives, including the Preferred Alternative, as part of completing this process the following grazing allotments within BLM-managed lands would be unavailable for grazing (per CMA LUPA-LIVE-7): Pilot Knob, Cady Mountain, Cronese Lake, and Harper Lake. The forage allocated to these allotments would be permanently reallocated to wildlife and ecosystem functions. The vegetation in

[1] Relinquishment of the grazing permit or lease is not the action that makes the land permanently unavailable for grazing. The Land Use Planning process completed by BLM makes the land permanently unavailable for livestock grazing.

the Valley View Allotment, which was previously allocated to livestock, will be reallocated to wildlife use and ecosystem function.

Under the Preferred Alternative, the following grazing allotments would be permanently unavailable (the forage reallocated to wildlife use and ecosystem functions per CMA LUPA-LIVE-8): Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi, Piute Valley, and Valley View.

These allotments would be permanently unavailable for the following reasons:

- National Landscape Conservation System (NLCS) lands (converted for wildlife and ecosystem values): Crescent Peak, Jean Lake, and Kessler Springs allotments
- DFAs (for renewable energy and transmission development): Oak Creek allotment
- Other uses: Buckhorn Canyon, Double Mountain, Johnson Valley, Chemehuevi, Piute Valley, and Valley View allotments

Overlaps of livestock grazing allotments with conservation designations on BLM-managed lands under the Preferred Alternative are shown in Appendix R2, Table R2.16-7.

Overlap of BLM land designations with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under the Preferred Alternative are presented in Appendix R2, Table R2.16-8.

### *Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.*

Under the Preferred Alternative, potential impacts on livestock grazing and grazing allotments from conservation designations would be both beneficial and adverse. Proposed ACEC and National Landscape Conservation System (NLCS) designations could benefit livestock grazing as a result of disturbance caps designed to conserve and protect the resource values. Development in NLCS lands would be limited to 1% of the total authorized disturbance, or to the level allowed by collocated ACEC and wildlife allocations, whichever is more restrictive. These disturbance caps and other management actions would minimize surface disturbance and provide protection for livestock grazing in active allotments. Proposed SRMAs could potentially have both adverse and beneficial impacts on grazing, depending on allowable uses within the SRMAs.

Under the Preferred Alternative, BLM land designations and lands managed for wilderness characteristics would overlap with approximately 1,801,000 acres, about 82%, of BLM grazing allotments within the LUPA Decision Area.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

BLM land designations and lands managed for wilderness characteristics would not involve activities or facilities that adversely impact adjacent grazing.

### *IV.16.3.2.3 Impacts of Transmission Outside the DRECP Area*

Potential impacts of transmission under the Preferred Alternative outside the DRECP area would be similar to those defined in Section IV.16.3.1.3 for the No Action Alternative.

### *IV.16.3.2.4 Comparison of the Preferred Alternative With No Action Alternative*

The following summary compares the Preferred Alternative and the No Action Alternative within DFAs for the Proposed LUPA:

- **No Action Alternative:** 13,000 acres of grazing allotments within the LUPA Decision Area may overlap with available development areas.
- **Preferred Alternative:** 14,300 acres of grazing allotments within the LUPA Decision Area may overlap with DFAs. Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from renewable energy and transmission development.
- Potential renewable energy and transmission development overlap with livestock grazing allotments would be less under the No Action Alternative by 1,300 acres.

The differences between the Preferred Alternative and No Action Alternative within BLM land designations are summarized below.

- **No Action Alternative:** Grazing allotments overlap with existing conservation designations, but no new proposed conservation designations would be under the No Action Alternative. Existing mitigation measures may reduce impacts.
- **Preferred Alternative:** Grazing allotments would overlap with 1,801,000 acres of existing and proposed conservation designations and lands managed for wilderness characteristics. Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from conservation designations.

The Preferred Alternative includes proposed NLCS designations as well as National Scenic and Historic Trails Management Corridors and lands managed for wilderness characteristics; this increases the total number of acres under conservation and protection when compared with the No Action Alternative. Under the Preferred Alternative, management of most existing allotments would remain unchanged, but allotments listed in CMAs LUPA-LIVE-7 and LUPA-LIVE-8 would be permanently unavailable for grazing.

## IV.16.3.3 Alternative 1

This section addresses two components of effects of the Proposed LUPA—the streamlined development of renewable energy and transmission on BLM land under the LUPA and the impacts of the amended land use plans themselves.

### *IV.16.3.3.1 Impacts for Renewable Energy and Transmission Development – Alternative 1*

Potential overlap of renewable energy and transmission development with grazing allotments within the LUPA Decision Area are shown in Appendix R2, Table R2.16-9 by technology type and in Figure IV.16-3.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 1 are presented in Appendix R2, Table R2.16-10.

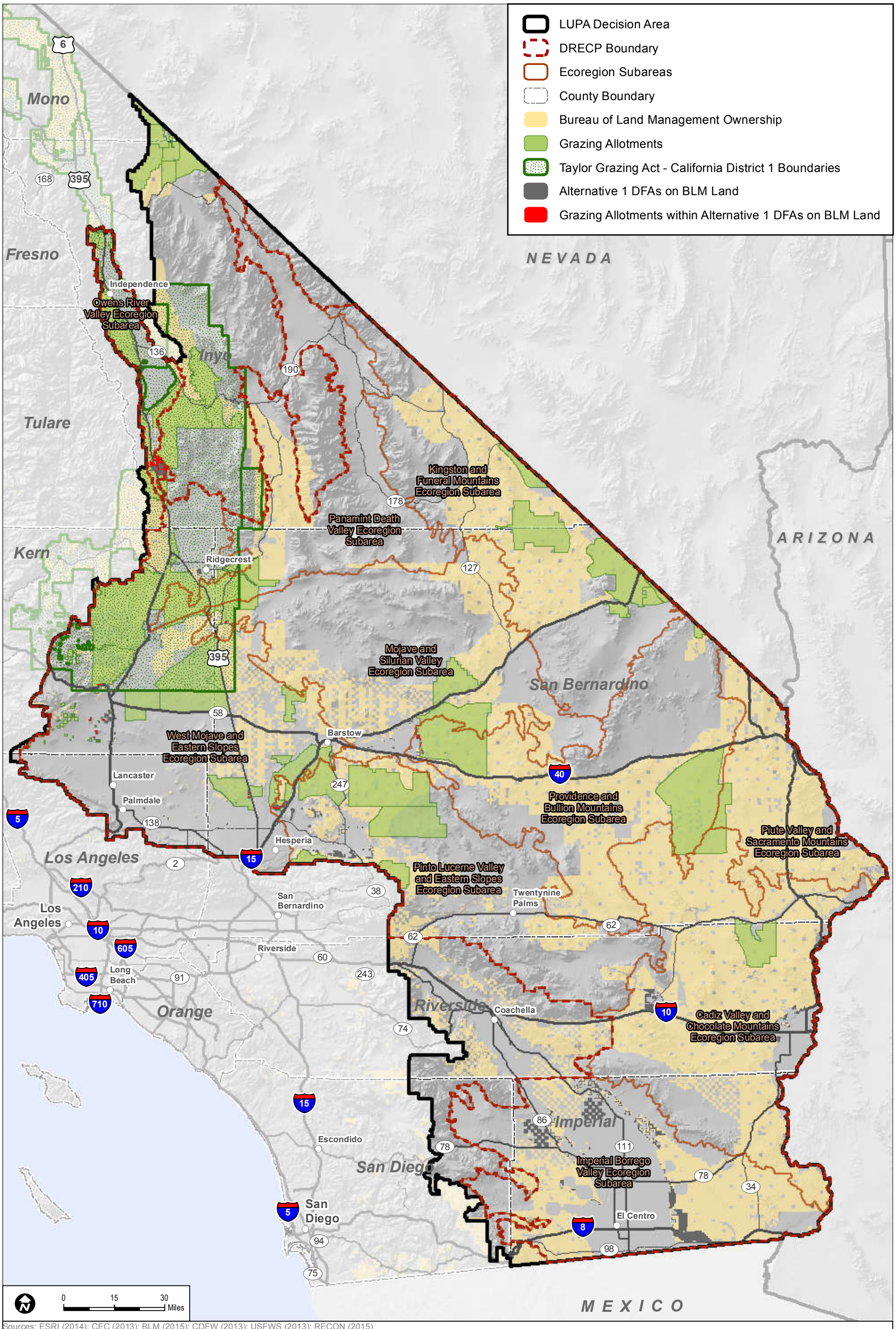
***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under Alternative 1, grazing allotments would occur within DFAs on BLM-managed lands (Figure IV.16-3). No grazing allotments would be within DFAs in the Bakersfield RMP Area. Approximately 7,500 acres of livestock grazing allotments would overlap with DFAs within the CDCA Area (5,200 acres of solar and 2,330 acres of transmission; see Table R2.16-9).

BLM grazing permits and leases would likely be canceled, modified, or reduced where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments areas cleared of vegetation. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Renewable energy and transmission development under Alternative 1 would have a variety of impacts on adjacent grazing operations. Potential impacts would be the same types as those described for the No Action Alternative.




Sources: ESRI (2014); CEC (2013); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-3**

**Grazing Land within DFAs – Alternative 1**

DRECP Proposed LUPA and Final EIS

October 2015

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### Impacts on Variance Process Lands

Variance Process Lands represent the BLM Solar PEIS Variance Lands as screened for the Proposed LUPA based on BLM screening criteria. Development of renewable energy on Variance Process Lands would not require a BLM LUPA; the environmental review process would be somewhat simpler than if the location were left undesignated. However, all solar, wind, and geothermal energy development applications would have to follow a variance process before BLM would determine whether to continue with processing them (see Volume II, Section II.3.3.3.2 for details of the variance process).

Under Alternative 1, 35,000 acres of Variance Process Lands are in the LUPA Decision Area. These lands are found in the following areas:

- East of Highway 395, north of Independence in Inyo County
- South of Sandy Valley along the California–Nevada border
- West of Needles
- Near State Route 62, west of Parker, Arizona, near the California–Arizona border
- North of Blythe, immediately south of the Big Maria Mountains Wilderness
- South of State Route 98, east of Imperial Valley, along the California–Mexico border
- Near Hidden Hills
- South of Historic Route 66, east of Marine Corps Air-Ground Combat Center (MCAGCC) Twentynine Palms, and both east and west of the City of Twentynine Palms
- Near the Big Maria Mountains Wilderness

Under Alternative 1, development designation of the Variance Process Lands could result in impacts if these lands overlap with grazing allotments. Impacts would be similar to those discussed above for DFAs. CMAs would apply and would reduce potential impacts.

#### *Conservation and Management Actions*

The conservation strategy for Alternative 1 (see Volume II, Section II.4.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy for Alternative 1 includes all the specific CMAs for the Preferred Alternative.

## *IV.16.3.3.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – Alternative 1*

Under Alternative 1, existing and proposed BLM land designations would provide ongoing conservation of lands, including livestock grazing allotments, within these areas.

Conservation designations may also result in restrictions to grazing or designation of allotments as unavailable for grazing.

As noted in Section IV.16.3.2.2, the Proposed LUPA is completing the relinquishment process for several allotments. Under all action alternatives, including Alternative 1, as part of completing this process the following grazing allotments within BLM-administered lands would be unavailable for grazing (per CMA LUPA-LIVE-7): Pilot Knob, Cady Mountain, Cronese Lake, and Harper Lake. The forage allocated to these allotments would be reallocated to wildlife and ecosystem functions.

Under Alternative 1, the following grazing allotments would be considered "relinquishable" (the forage reallocated to wildlife use and ecosystem functions per CMA LUPA-LIVE-8): Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi, Piute Valley, and Valley View.

These allotments would be relinquished as follows:

- NLCS lands (convert for wildlife and ecosystem values): Crescent Peak allotment
- ACECs (converted for wildlife and ecosystem values): Jean Lake, Kessler Springs, and Valley View allotments
- Other uses: Buckhorn Canyon, Double Mountain, Johnson Valley, Oak Creek, Chemehuevi, Piute Valley allotments

Overlaps of livestock grazing allotments with conservation designations on BLM-managed lands under Alternative 1 are shown in Appendix R2, Table R2.16-11.

Overlap of BLM land designations with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 1 are presented in Appendix R2, Table R2.16-12.

### *Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.*

Under Alternative 1, potential impacts on livestock grazing and grazing allotments from conservation designations would be both beneficial and adverse. Proposed ACEC and NLCS designations could benefit livestock grazing as a result of disturbance caps designed to conserve and protect the resource values. Development in NLCS lands would be limited to 1% of total authorized disturbance, or to the level allowed by collocated ACEC and wildlife allocations, whichever is more restrictive. These disturbance caps and other management actions would minimize surface disturbance and provide protection for livestock grazing in

active allotments. Proposed SRMAs could potentially have both adverse and beneficial impacts on grazing, depending on allowable uses within the SRMAs.

Under Alternative 1, conservation designations and lands managed for wilderness characteristics would overlap with approximately 1,495,000 acres, about 68%, of BLM grazing allotments within the LUPA Decision Area.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

BLM land designations and lands managed for wilderness characteristics would not involve activities or facilities that adversely impact adjacent grazing.

### *IV.16.3.3.3 Impacts of Transmission Outside the DRECP Area*

Potential impacts of transmission under Alternative 1 outside the DRECP area would be similar to those defined in Section IV.16.3.1.3 for the No Action Alternative.

### *IV.16.3.3.4 Comparison of Alternative 1 With the Preferred Alternative*

The following summary compares Alternative 1 and the Preferred Alternative within DFAs for the Proposed LUPA:

- **Alternative 1:** Approximately 7,500 acres of grazing allotments would occur within DFAs on BLM-managed lands.
- **Preferred Alternative:** Approximately 14,300 acres of grazing allotments within the LUPA Decision Area may overlap with DFAs.

Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from renewable energy and transmission development under both the Preferred Alternative and Alternative 1.

The differences between Alternative 1 and the Preferred Alternative within BLM Land Designations are summarized here.

- **Alternative 1:** There would be 1,495,000 acres of grazing allotments within BLM land designations and lands managed for wilderness characteristics.
- **Preferred Alternative:** Grazing allotments would overlap with 1,801,000 acres of existing and proposed BLM land designations and lands managed for wilderness characteristics.

Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from conservation designations under both the Preferred Alternative and Alternative 1. Alternative 1 would have approximately 6,800 fewer acres of DFAs and 306,000 fewer

acres of BLM land designations and lands managed for wilderness characteristics than the Preferred Alternative, as outlined above.

## IV.16.3.4 Alternative 2

This section addresses two components of effects of the Proposed LUPA—the streamlined development of renewable energy and transmission on BLM-managed land under the LUPA, and the impacts of the amended land use plans themselves.

### *IV.16.3.4.1 Impacts for Renewable Energy and Transmission Development – Alternative 2*

Potential overlap of renewable energy and transmission development with grazing allotments within the LUPA Decision Area are shown in Appendix R2, Table IV.16-13 by technology type and in Figure IV.16-4.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 2 are presented in Appendix R2, Table IV.16-14.

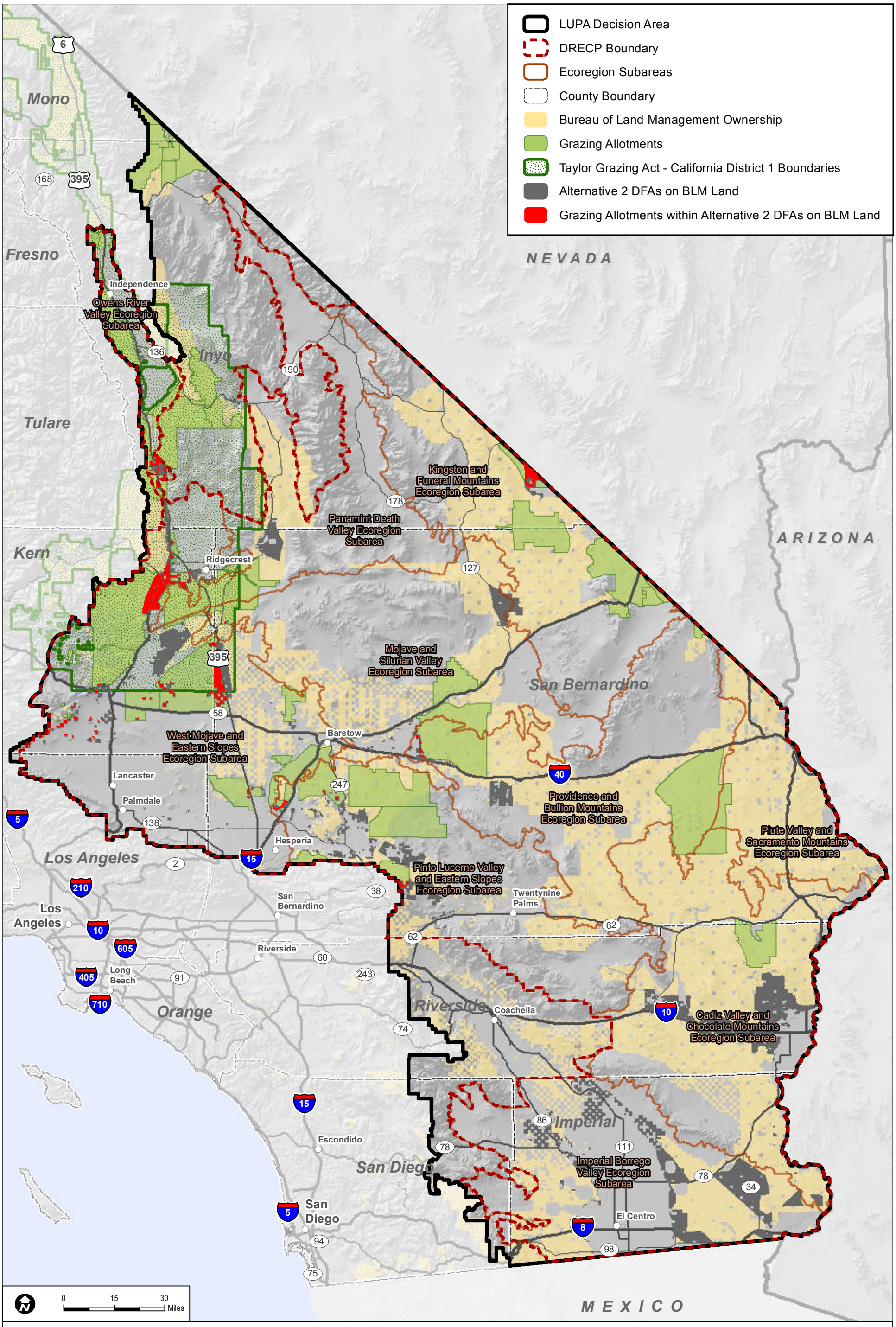
***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under Alternative 2, grazing allotments would occur within DFAs on BLM-managed lands (Figure IV.16-4). No grazing allotments would be within DFAs in the Bakersfield RMP Area. Approximately 12,000 acres of livestock grazing allotments would overlap with DFAs within the CDCA Area (7,500 acres of solar, 400 acres of wind, 800 acres of geothermal, and 3,290 acres of transmission; see Table R2.16-13).

BLM grazing permits and leases would likely be canceled, modified, or reduced where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments, areas cleared of vegetation would have a loss of forage. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment which, due to their location or nature, would impair use of adjacent grazing lands.***

Renewable energy and transmission development under Alternative 2 would have a variety of impacts on adjacent grazing operations. Potential impacts would be the same types as those described for the No Action Alternative.




Sources: ESRI (2014); CEC (2013); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-4**

**Grazing Land within DFAs – Alternative 2**



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### Impacts on Variance Process Lands

Variance Process Lands represent the BLM Solar PEIS Variance Lands as screened for the Proposed LUPA based on BLM screening criteria. Development of renewable energy on Variance Process Lands would not require a BLM LUPA; the environmental review process would be somewhat simpler than if the location were left undesignated. However, all solar, wind, and geothermal energy development applications would have to follow a variance process before BLM would determine whether to continue with processing them (see Volume II, Section II.3.3.3.2 for details of the variance process).

Under Alternative 2, 29,000 acres of Variance Process Lands are in the LUPA Decision Area. These lands are found in the following areas:

- Immediately south of MCAGCC Twentynine Palms both east and west of the City of Twentynine Palms
- North of Victorville

Under Alternative 2, development of the Variance Process Lands could result in impacts if these lands overlap with grazing allotments. Impacts would be similar to those discussed above for DFAs. CMAs would apply and would reduce potential impacts.

#### *Conservation and Management Actions*

The conservation strategy for Alternative 2 (see Volume II, Section II.5.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy for Alternative 2 includes all the specific CMAs for the Preferred Alternative.

## *IV.16.3.4.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – Alternative 2*

Under Alternative 2, existing and proposed BLM land designations would provide ongoing conservation of lands, including livestock grazing allotments, within these areas. Conservation designations may also result in restrictions to grazing or designation of allotments as unavailable for grazing.

As noted in Section IV.16.3.2.2, the Proposed LUPA is completing the relinquishment process for several allotments. Under all action alternatives, including Alternative 2, as part of completing this process the following grazing allotments within BLM-administered lands would be unavailable for grazing (per CMA LUPA-LIVE-7): Pilot Knob, Cady Mountain, Cronese Lake, and Harper Lake. The forage allocated to these allotments would be reallocated to wildlife and ecosystem functions.

Under Alternative 2, the following grazing allotments would be considered "relinquishable" (the forage reallocated to wildlife use and ecosystem functions per CMA LUPA-LIVE-8): Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi, Piute Valley, and Valley View.

These allotments would be relinquished as follows:

- NLCS lands (convert for wildlife and ecosystem values): Crescent Peak, Double Mountain, and Valley View allotments
- DFAs: Oak Creek allotment
- Other uses: Buckhorn Canyon, Jean Lake, Johnson Valley, Kessler Springs, Chemehuevi, and Piute Valley allotments

Overlaps of livestock grazing allotments with conservation designations on BLM-administered lands under Alternative 2 are shown in Appendix R2, Table R2.16-15.

Overlap of BLM land designations with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 2 are presented in Appendix R2, Table IV.16-16.

### *Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.*

Under Alternative 2, potential impacts on livestock grazing and grazing allotments from conservation designations would be both beneficial and adverse. Proposed ACEC and NLCS designations could benefit livestock grazing as a result of disturbance caps designed to conserve and protect the resource values. Development in NLCS lands would be limited to 1% of total authorized disturbance, or to the level allowed by collocated ACEC and wildlife allocations, whichever is more restrictive. These disturbance caps and other management actions would minimize surface disturbance and provide protection for livestock grazing in active allotments. Proposed SRMAs could potentially have both adverse and beneficial impacts on grazing, depending on allowable uses within the SRMAs.

Under Alternative 2, conservation designations and lands managed for wilderness characteristics would overlap with the majority of BLM grazing allotments within the LUPA Decision Area.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

BLM land designations and lands managed for wilderness characteristics would not involve activities or facilities that adversely impact adjacent grazing.

### *IV.16.3.4.3 Impacts of Transmission Outside the DRECP Area*

Potential impacts of transmission under Alternative 2 outside the DRECP area would be similar to those defined in Section IV.16.3.1.3 for the No Action Alternative.

### *IV.16.3.4.4 Comparison of Alternative 2 With the Preferred Alternative*

The following summary compares Alternative 2 and the Preferred Alternative within DFAs for the Proposed LUPA.

- **Alternative 2:** Approximately 12,000 acres of livestock grazing allotments would overlap with renewable energy and transmission development DFAs in the LUPA Decision Area.
- **Preferred Alternative:** Approximately 14,300 acres of grazing allotments within the LUPA Decision Area may overlap with DFAs.

Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from renewable energy and transmission development under both the Preferred Alternative and Alternative 2.

The differences between Alternative 2 and the Preferred Alternative within BLM land designations are summarized here.

- **Alternative 2:** Grazing allotments would overlap with approximately 2.4 million acres of existing and proposed BLM land designations.
- **Preferred Alternative**: Grazing allotments would overlap with 1,801,000 acres of existing and proposed conservation designations and lands managed for wilderness characteristics. Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from conservation designations and lands managed for wilderness characteristics under both the Preferred Alternative and Alternative 2. Alternative 2 would have approximately 2,000 fewer acres of DFAs and about 609,000 more BLM land designations and lands managed for wilderness characteristics as the Preferred Alternative, as outlined above.

## IV.16.3.5 Alternative 3

This section addresses two components of effects of the Proposed LUPA—the streamlined development of renewable energy and transmission on BLM-managed land under the LUPA, and the impacts of the amended land use plans themselves.

### *IV.16.3.5.1 Impacts for Renewable Energy and Transmission Development – Alternative 3*

Potential overlap of renewable energy and transmission development with grazing allotments within the LUPA Decision Area are shown in Appendix R2, Table R2.16-17 by technology type and in Figure IV.16-5.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 3 are presented in Appendix R2, Table R2.16-18.

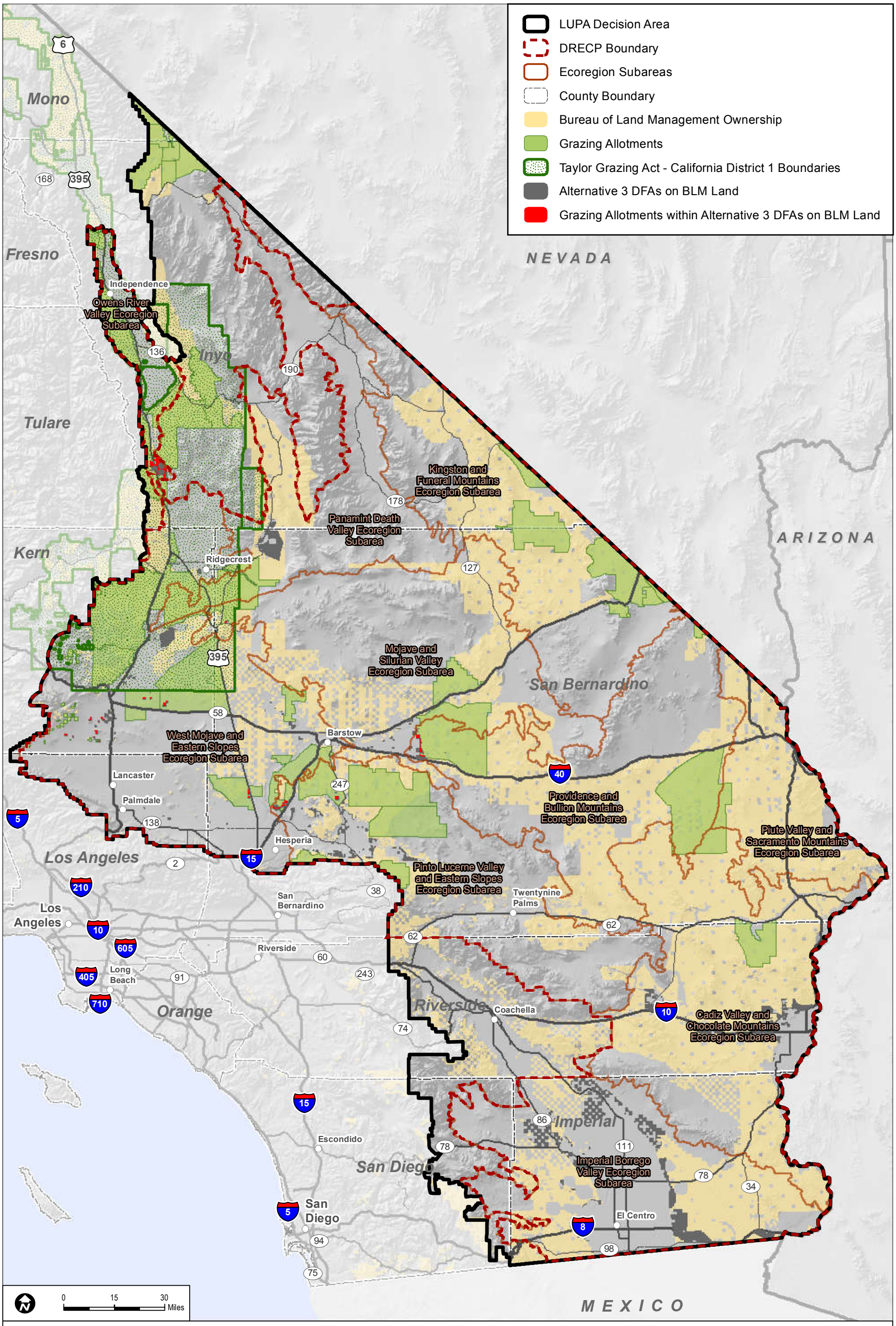
***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under Alternative 3, grazing allotments would occur within DFAs on BLM-managed lands (Figure IV.16-5). There would be no grazing allotments within DFAs in the Bakersfield RMP Area. Approximately 5,300 acres of livestock grazing allotments would overlap with DFAs within the CDCA Area (2,800 acres of solar, 70 acres of wind, and 2,400 acres of transmission; see Table R2.16-17).

BLM grazing permits and leases would likely be canceled, modified, or reduced where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments, areas cleared of vegetation would have a loss of forage. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Potential impacts would be the same types as those described for the No Action Alternative.




Sources: ESRI (2014); CEC (2013); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-5**
**Grazing Land within DFAs – Alternative 3**



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### Impacts on Variance Process Lands

Variance Process Lands represent the BLM Solar PEIS Variance Lands as screened for the Proposed LUPA based on BLM screening criteria. Development of renewable energy on Variance Process Lands would not require a BLM LUPA; the environmental review process would be somewhat simpler than if the location were left undesignated. However, all solar, wind, and geothermal energy development applications would have to follow a variance process before BLM would determine whether to continue with processing them (see Volume II, Section II.3.3.3.2 for details of the variance process).

Under Alternative 3, 2,000 acres of Variance Process Lands are in the LUPA Decision Area. These lands are found in the Lucerne Valley, both east and west of State Route 247. Development of the Variance Process Lands could result in impacts if these lands overlap with grazing allotments. Impacts would be similar to those discussed above for DFAs. CMAs would apply and would reduce potential impacts.

#### *Conservation and Management Actions*

The conservation strategy for Alternative 3 (see Volume II, Section II.6.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy for Alternative 3 includes all the specific CMAs for the Preferred Alternative.

## *IV.16.3.5.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – Alternative 3*

Under Alternative 3, existing and proposed BLM land designations would provide ongoing conservation of lands, including livestock grazing allotments, within these areas. Conservation designations may also result in restrictions to grazing or designation of allotments as unavailable for grazing.

As noted in Section IV.16.3.2.2, the Proposed LUPA is completing the relinquishment process for several allotments. Under all action alternatives, including Alternative 3, as part of this process the following grazing allotments within BLM-administered lands would be unavailable for grazing (per CMA LUPA-LIVE-7): Pilot Knob, Cady Mountain, Cronese Lake, and Harper Lake. The forage allocated to these allotments would be reallocated to wildlife and ecosystem functions.

Under Alternative 3, the following grazing allotments would be "relinquishable" (the forage reallocated to wildlife use and ecosystem functions per CMA LUPA-LIVE-8): Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi, Piute Valley, and Valley View. These allotments would be relinquished as follows:

- NLCS lands (convert for wildlife and ecosystem values): Crescent Peak, Jean Lake, and Kessler Springs allotments

- Other uses: Buckhorn Canyon, Double Mountain, Johnson Valley, Oak Creek, Chemehuevi, Piute Valley, and Valley View allotments

Overlaps of livestock grazing allotments with conservation designations on BLM-administered lands under Alternative 3 are shown in Appendix R2, Table IV.16-19.

Overlap of BLM land designations with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 3 are presented in Appendix R2, Table R2.16-20.

***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under Alternative 3, potential impacts on livestock grazing and grazing allotments from conservation designations would be both beneficial and adverse. Proposed ACEC and NLCS designations could benefit livestock grazing as a result of disturbance caps designed to conserve and protect the resource values. Development in NLCS lands would be limited to 0.25% of total authorized disturbance, or to the level allowed by collocated ACEC and wildlife allocations, whichever is more restrictive. These disturbance caps and other management actions would minimize surface disturbance and provide protection for livestock grazing in active allotments. Proposed SRMAs could potentially have both adverse and beneficial impacts on grazing, depending on allowable uses within the SRMAs.

Under Alternative 3, conservation designations and lands managed for wilderness characteristics would overlap with the majority of BLM grazing allotments within the LUPA Decision Area.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

BLM land designations and lands managed for wilderness characteristics would not involve activities or facilities that adversely impact adjacent grazing.

### *IV.16.3.5.3 Impacts of Transmission Outside the DRECP Area*

Potential impacts of transmission under Alternative 3 outside the DRECP area would be similar to those defined in Section IV.16.3.1.3 for the No Action Alternative.

#### *IV.16.3.5.4 Comparison of Alternative 3 With the Preferred Alternative*

The following summary compares Alternative 3 and the Preferred Alternative within DFAs for the Proposed LUPA:

- **Alternative 3:** Approximately 5,300 acres of livestock grazing allotments would overlap with DFAs within the LUPA Decision Area.
- **Preferred Alternative:** Approximately 14,300 acres of grazing allotments within the LUPA Decision Area may overlap with DFAs.

Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from renewable energy and transmission development under both the Preferred Alternative and Alternative 3.

The differences between Alternative 3 and the Preferred Alternative within BLM land designations are summarized here.

- **Alternative 3:** The majority of grazing allotments (2,279,000 acres) would overlap with existing and proposed BLM land designations.
- **Preferred Alternative**: Grazing allotments would overlap with 1,801,000 acres of existing and proposed conservation designations and lands managed for wilderness characteristics. Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from conservation designations under both the Preferred Alternative and Alternative 3. Alternative 3 would have approximately 9,000 fewer acres of DFAs and 478,000 more acres of BLM land designations and lands managed for wilderness characteristics as the Preferred Alternative, as outlined above.

### IV.16.3.6 Alternative 4

This section addresses two components of effects of the Proposed LUPA—the streamlined development of renewable energy and transmission on BLM-managed land under the LUPA, and the impacts of the amended land use plans themselves.

#### *IV.16.3.6.1 Impacts for Renewable Energy and Transmission Development – Alternative 4*

Potential overlap of renewable energy and transmission development with grazing allotments within the LUPA Decision Area are shown in Appendix R2, Table R2.16-21 by technology type and in Figure IV.16-6.

Overlap of potential renewable energy technology and transmission with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 4 are presented in Appendix R2, Table R2.16-22.

***Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.***

Under Alternative 4, grazing allotments would occur within DFAs on BLM-managed lands (Figure IV.16-6). No grazing allotments would be within DFAs in the Bakersfield RMP Area. There would be approximately 4,400 acres of grazing allotments within DFAs on BLM-managed lands (2,800 acres of solar, 70 acres of wind, and 2,400 acres of transmission; see Table R2.16-21).

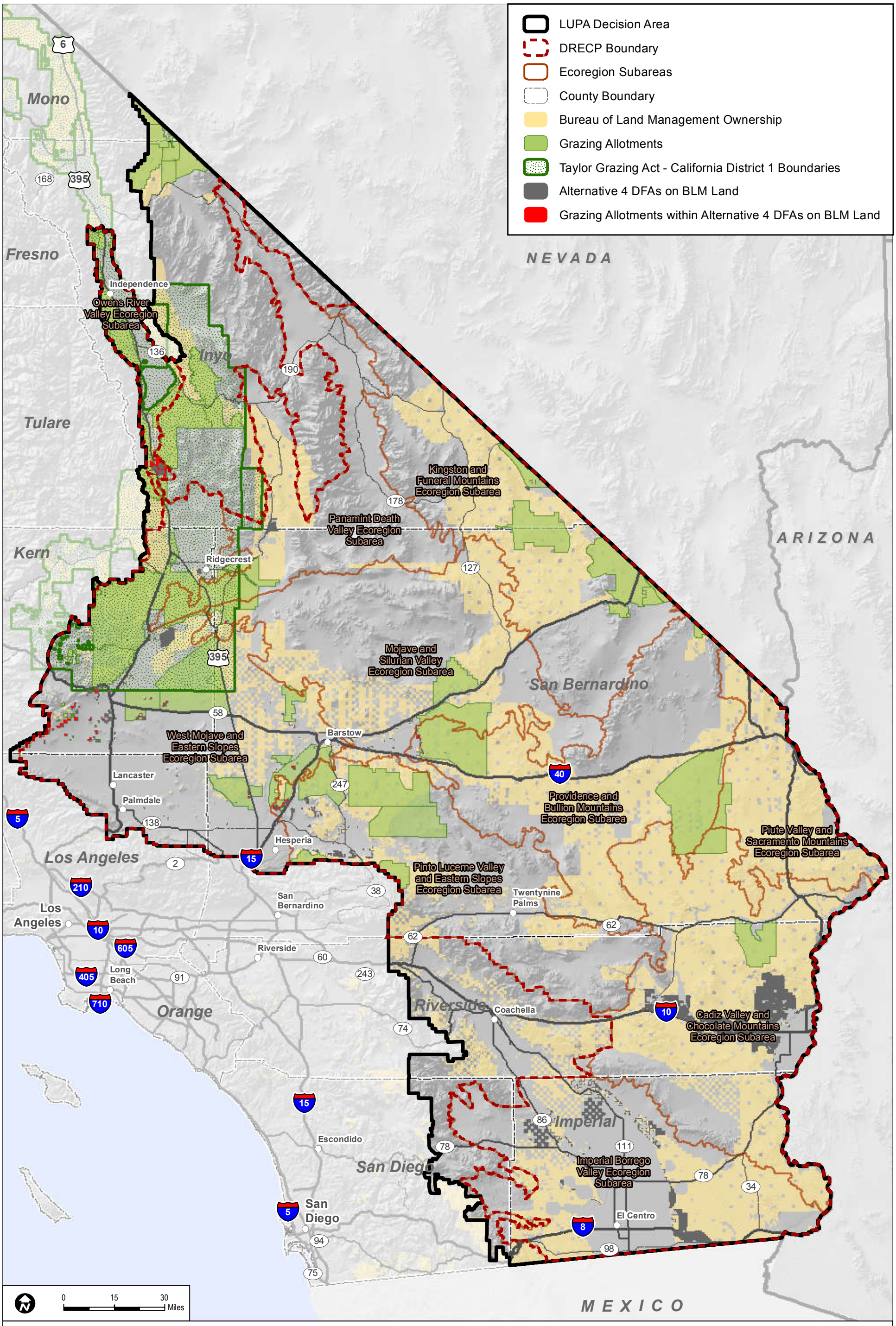
BLM grazing permits and leases would likely be canceled, modified, or reduced where solar and geothermal projects are developed. If grazing continues in undeveloped portions of allotments, areas cleared of vegetation would be have a loss of forage. Renewable energy development may result in adverse socioeconomic impacts on ranchers and grazing communities from the modification or loss of grazing privileges, particularly where grazing has been a longstanding and important tradition.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

Renewable energy and transmission development under Alternative 4would have a variety of impacts on adjacent grazing operations. Renewable energy and transmission development under Alternative 3 would have a variety of impacts on adjacent grazing operations. Potential impacts would be the same types as those described for the No Action Alternative.

**Impacts on Variance Process Lands**

Variance Process Lands represent the BLM Solar PEIS Variance Lands as screened for the Proposed LUPA based on BLM screening criteria. Development of renewable energy on Variance Process Lands would not require a BLM LUPA; the environmental review process would be somewhat simpler than if the location were left undesignated. However, all solar, wind, and geothermal energy development applications would have to follow a variance process before BLM would determine whether to continue with processing them (see Volume II, Section II.3.3.3.2 for details of the variance process).




Sources: ESRI (2014); CEC (2013); BLM (2015); CDFW (2013); USFWS (2013); RECON (2015)

**FIGURE IV.16-6**
**Grazing Land within DFAs – Alternative 4**



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Under Alternative 4, 579,000 acres of Variance Process Lands are in the LUPA Decision Area. These lands are found in the following areas:

- East of Highway 395, north of Independence in Inyo County
- South of Sandy Valley along the California–Nevada border
- West of Needles
- Near State Route 62, west of Parker, Arizona, near the California–Arizona border
- North of Blythe, immediately south of the Big Maria Mountains Wilderness
- South of State Route 98, east of Imperial Valley, along the California–Mexico border
- North of Hidden Hills along the California–Nevada border
- North of Interstate 15 east of Fort Irwin
- Surrounding the Owens Dry Lake
- East of California City north of Edwards Air Force Base
- Surrounding Barstow
- Scattered around Adelanto, Victorville, and in Lucerne Valley
- East and West of the City of Twentynine Palms
- South of Interstate 40 near Ludlow
- South of Historic Route 66 east of MCAGCC Twentynine Palms
- North of the Rice Valley Wilderness and Big Maria Mountains Wilderness along State Route 62
- South of Interstate 10 east of the Chuckwalla Mountains Wilderness
- South of Interstate 10, immediately north of the Palo Verde Mountains Wilderness
- Scattered west and south of the Chocolate Mountains east of the Imperial Sand Dunes including east of Holtville and south of State Route 98

Development of the Variance Process Lands could result in impacts if these lands overlap with grazing allotments. Impacts would be similar to those discussed above for DFAs. CMAs would apply and would reduce potential impacts.

### *Conservation and Management Actions*

The conservation strategy for Alternative 4 (see Volume II, Section II.7.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy for Alternative 4 includes all the specific CMAs for the Preferred Alternative.

### *IV.16.3.6.2 Impacts of Ecological and Cultural Conservation and Recreation Designations – Alternative 4*

Under Alternative 4, existing and proposed BLM land designations would provide ongoing conservation of lands, including livestock grazing allotments, within these areas. Conservation designations may also result in restrictions to grazing or designation of allotments as unavailable for grazing.

As noted in Section IV.16.3.2.2, the Proposed LUPA is completing the relinquishment process for several allotments. Under all action alternatives, including Alternative 4, as part of this process the following grazing allotments within BLM-administered lands would be unavailable for grazing (per CMA LUPA-LIVE-7): Pilot Knob, Cady Mountain, Cronese Lake, and Harper Lake. The forage allocated to these allotments would be reallocated to wildlife and ecosystem functions.

Under Alternative 4, the following grazing allotments would be "relinquishable" (the forage reallocated to wildlife use and ecosystem functions per CMA LUPA-LIVE-8): Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi, Piute Valley, and Valley View. These allotments would be relinquished as follows:

- NLCS lands (convert for wildlife and ecosystem values): Crescent Peak, Jean Lake, and Kessler Springs allotments
- DFAs: Oak Creek allotment
- Other uses: Buckhorn Canyon, Double Mountain, Johnson Valley, Chemehuevi, Piute Valley, and Valley View allotments

Overlaps of livestock grazing allotments with conservation designations on BLM-administered lands under Alternative 4 are shown in Appendix R2, Table R2.16-23.

Overlap of BLM land designations with grazing allotments within land use plan boundaries (CDCA Area, Bakersfield RMP Area, and Bishop RMP Area) under Alternative 4 are presented in Appendix R2, Table R2.16-24.

#### *Impact LG-1: Alternative would have adverse and beneficial effects on livestock grazing.*

Under Alternative 4, potential impacts on livestock grazing and grazing allotments from conservation designations would be both beneficial and adverse. Proposed ACEC and NLCS designations could benefit livestock grazing as a result of disturbance caps designed to conserve and protect the resource values. Development in NLCS lands would be limited to

1% of total authorized disturbance, or to the level allowed by collocated ACEC and wildlife allocations, whichever is more restrictive. These disturbance caps and other management actions would minimize surface disturbance and provide protection for livestock grazing in active allotments. Proposed SRMAs could potentially have adverse or beneficial impacts on grazing, depending on the allowable uses within the SRMAs. Where grazing activities are restricted or eliminated in conservation designations, impacts would be adverse.

Under Alternative 4, approximately 1.6 million acres of conservation designations and lands managed for wilderness characteristics would overlap with grazing allotments within the LUPA Decision Area.

***Impact LG-2: Alternative would involve other changes in the existing environment that, due to their location or nature, would impair use of adjacent grazing lands.***

BLM land designations and lands managed for wilderness characteristics would not involve activities or facilities that adversely impact adjacent grazing.

### *IV.16.3.6.3 Impacts of Transmission Outside the DRECP Area*

Potential impacts of transmission under Alternative 4 outside the DRECP area would be similar to those defined in Section IV.16.3.1.3 for the No Action Alternative.

### *IV.16.3.6.4 Comparison of Alternative 4 With Preferred Alternative*

The following summary compares Alternative 4 and the Preferred Alternative within DFAs for the Proposed LUPA.

- **Alternative 4:** Approximately 4,400 acres of grazing allotments would overlap with DFAs on BLM-managed lands in the LUPA Decision Area.
- **Preferred Alternative:** Approximately 14,300 acres of grazing allotments within the LUPA Decision Area may overlap with DFAs.

Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from renewable energy and transmission development under both the Preferred Alternative and Alternative 4.

The differences between Alternative 4 and the Preferred Alternative within BLM land designations follow.

- **Alternative 4:** The majority of grazing allotments (approximately 1,618,000 acres) would overlap with existing and proposed BLM land designations.

- **Preferred Alternative**: Grazing allotments would overlap with 1,801,000 acres of existing and proposed conservation designations and lands managed for wilderness characteristics. Proposed LUPA CMAs for livestock grazing would reduce impacts to grazing from conservation designations under both the Preferred Alternative and Alternative 4. Alternative 4 would have approximately 9,900 fewer acres of DFAs and approximately 183,000 fewer acres of BLM land designations and lands managed for wilderness characteristics as the Preferred Alternative, as outlined above.